



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,436	07/18/2003	Josef Ruppert	8178	4973
7590 05/12/2005			EXAMINER	
Woodling, Krost and Rust Kenneth L. Mitchell 9213 Chillicothe Road Kirtland, OH 44094			ABDELWAHED, ALI F	
			ART UNIT	PAPER NUMBER
			3722	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

5P

## Office Action Summary

Application No.

10/622,436

Applicant(s)

RUPPERT, JOSEF

Examiner

Ali Abdelwahed

Art Unit

3722

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-18 is/are rejected.
- 7) ☒ Claim(s) 9-11, 19, 20 and 22-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 20 is objected to because of the following informalities:

It is suggested that in:

Claim 20, line 1, delete "1" and insert -2--.

Claim 20, line 5, delete "grooves" and insert -groove--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,582,458 to Korb et al.

Korb et al. discloses a drilling tool (10) with a chip groove (18), a first bit stage designed as a core bit (1), and at least one second bit stage (2-9) arranged in the form of a step (see fig.1). All of the bit stages have at least one common chip groove (see fig.1). The chip groove has an even base (13) and is straight (see fig.1). The chip groove also has flanks (see fig. 3) that are of unequal height (see figs.1, 3; the left edge of the chip groove is higher than the right edge of the chip groove). The flanks of the chip groove are in a diagonal orientation with respect to the groove base (see figs.1, 7).

Art Unit: 3722

The path of the chip groove increases in diameter through the successive bit stages (see figs.1, 7), which forms an imaginary cone (the imaginary cone is defined by the tool having a cone shape as seen in figs.1, 7). The depth of the chip groove has virtually the same depth throughout the bit stages, and the chip groove of each bit stage is a spiral-groove segment smaller than a quarter of a full spiral turn (see figs.1, 3, 7).

Claims 1-8 and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,466,100 to Ahluwalia.

Ahluwalia discloses a drilling tool (10) with a chip groove (46, 48), a first bit stage designed as a core bit (28), and at least one second bit stage (18-26) arranged in the form of a step (see figs.1, 5). All of the bit stages have at least one common chip groove (see figs.1, 5). The chip groove has an even base (16) and is straight (see figs.1, 5). The chip groove also has flanks (see fig. 2) that are of unequal height (see figs.1, 5; the left edge of the chip groove is higher than the right edge of the chip groove). The flanks of the chip groove are in a vertical or diagonal orientation with respect to the groove base (see figs.1, 5). The path of the chip groove increases in diameter through the successive bit stages (see figs.1, 5), which forms an imaginary cone (the imaginary cone is defined by the tool having a cone shape as seen in figs.1, 5). The depth of the chip groove has virtually the same depth throughout the bit stages, and the chip groove of each bit stage is a spiral-groove segment smaller than a quarter of a full spiral turn (see figs.1, 2, 5).

Art Unit: 3722

Claims 1-8 and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 63016912 A to Shibata.

Shibata discloses a drilling tool (1) with a chip groove (8), a first bit stage designed as a core bit (13), and at least one second bit stage (3b-e) arranged in the form of a step (see fig.1). All of the bit stages have at least one common chip groove (see figs.1, 2). The chip groove has an even base (6) and is straight (see figs.1, 2). The chip groove also has flanks (10) that are of unequal height (see figs.1, 2; the left edge of the chip groove is higher than the right edge of the chip groove). The flanks of the chip groove are in a diagonal orientation with respect to the groove base (see figs.1, 2). The path of the chip groove increases in diameter through the successive bit stages (see figs.1, 2), which forms an imaginary cone (the imaginary cone is defined by the tool having a cone shape as seen in figs.1, 2). The depth of the chip groove has virtually the same depth throughout the bit stages, and the chip groove of each bit stage is a spiral-groove segment smaller than a quarter of a full spiral turn (see figs.1-3).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3722

***Allowable Subject Matter***

Claims 9-11, 19, 20, and 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

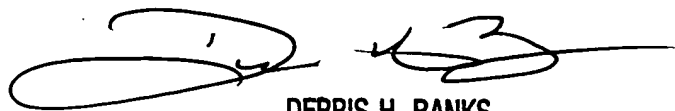
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Abdelwahed whose telephone number is (571) 272-4417. The examiner can normally be reached Monday through Friday from 10:00 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272-4419.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the examiner or the examiner's supervisor.

AA

05/05/2005

A handwritten signature in black ink, appearing to read 'D. Banks', is written over the printed name.

DERRIS H. BANKS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700